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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,467	01/14/2004	Otis P. Sherr	03-SHE/101	5837

22890 7590 08/05/2005

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EXAMINER

CONLEY, SEAN EVERETT

ART UNIT PAPER NUMBER

1744

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,467

Applicant(s)

SHERR, OTIS P.

Examiner

Sean E. Conley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 1-4, 7-9, 11-14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (U.S. Patent No. 5,053,205) in view of Khan (U.S. Patent No. 6,309,538 B1).

Regarding claims 1 and 11, Taylor et al. discloses a solar powered floatable chlorinating apparatus for a pool. The chemical dispensing device of Taylor et al. specifically comprises and provides the following to make the device: a) a housing having a first compartment (13) and a second compartment (16), said first compartment (13) and said second compartment (16) being separated by a dividing wall, and said second compartment (16) being in fluid communication with said medium (see col. 3,

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lines 6-27); b) propulsion means (20) located in, on, and detachably attached to said first compartment (13), whereby said chemical dispensing device can be self-propelled through said medium (see col. 3, lines 19-55); and c) chemical containment means located in said second compartment (16), whereby solid chemical compounds are stored for dispersion within a medium (see col. 3, lines 11-17). Taylor et al. fails to teach a chemical dispersement rate adjustment means, whereby the dispersement rate within a medium, of said solid chemical compounds stored for dispersion within said chemical containment means, is adjustable.

Khan discloses a spa chemistry monitoring and chemical dispensing unit. More particularly, Khan discloses a spa chemistry monitor unit (10) which provides automatic and unattended monitoring of water chemistry parameters in a spa or hot tub (12) or the like, and for automatic or unattended dispensing of one or more chemical agents in appropriate amounts in response to parameter readings. The monitoring unit (10) includes a controller (16) that automatically dispenses one or more specific chemical agents in a dosage amount or rate of flow to maintain the spa water in a substantially optimized condition (see col. 4, line 50 to col. 5, line 2). The unit (10) includes a solid soluble chemical agent within cartridge (61) mounted removably on the housing base (48) for engagement with a pair of solenoid actuators (62) to regulate contact of the soluble chemical agent with the spa water (see col. 5, lines 62-67). The controller (16) responds automatically to the detected water chemistry levels to deliver the chemical agents in appropriate amounts. Specifically, the actuators (62) are activated by controller (16) to open the cartridge (61) for ingress of spa water to dissolve the soluble

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chemical sanitizing agent (e.g., bromine tablets) contained therein. Additionally, when the detected level is above a prescribed range the actuators (62) are closed to prevent further addition of the soluble chemical sanitizing agent in the water (see col. 6, line 42 to col. 7, line 9). This reference has been relied upon to teach that it is known to use a chemical dispersement rate adjustment means in order to control the rate at which a chemical is dispensed into a medium.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Taylor et al. and include a chemical dispersement rate adjustment means in the chemical dispenser as taught by Khan in order to control the amount of solid chemical compounds that are dispersed into the medium in response to a sensed condition in the medium.

Regarding claims 2 and 12, Taylor et al. discloses and provides a first compartment (13) is fully sealed from contamination by said medium, and further wherein said propulsion means located in said first compartment is sealed from contamination by said medium (see figure 3, col. 3, lines 19-50).

Regarding claims 3 and 13, Taylor et al. discloses and provides a first compartment that further includes a flotation unit and a ballast unit to obtain a desired buoyancy for the device as a whole (see col. 3, lines 19-27).

Regarding claims 4, 7, 8, 14, 17, and 18 Taylor et al. discloses and provides a propulsion means (20) that includes an electric motor (22), power transfer means (solar panel (21)) and an external actuator (propeller (24)) for setting the device into motion

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(see figure 3; col. 3, lines 27-39). The solar panel is located on the upper portion of the device so that the panel (21) is exposed to sunlight (see figure 1; col. 3, lines 39-41).

Regarding claims 9 and 19, Taylor et al. discloses and provides a chemical containment means located in said second compartment (16) that includes a detachably removable compartment cover, whereby, said cover is detached, removed, filled with solid chemical to be dispersed, and replaced prior to deployment of said device (see figures 1 and 3; col. 3, lines 9-18). Furthermore, Taylor et al. discloses an alternative embodiment wherein a retrofit drive system (60) is adapted to operably couple to an existing floating chlorinator (68) (see figure 6).

2. Claims 1-4, 7-10, 11-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (U.S. Patent No. 5,053,205) in view of Mercer (U.S. Patent No. 6,508,929 B1).

Regarding claims 1, 10, 11, and 20, Taylor et al. discloses a solar powered floatable chlorinating apparatus for a pool. The chemical dispensing device of Taylor et al. specifically comprises and provides the following to make the device: a) a housing having a first compartment (13) and a second compartment (16), said first compartment (13) and said second compartment (16) being separated by a dividing wall, and said second compartment (16) being in fluid communication with said medium (see col. 3, lines 6-27); b) propulsion means (20) located in, on, and detachably attached to said first compartment (13), whereby said chemical dispensing device can be self-propelled through said medium (see col. 3, lines 19-55); and c) chemical containment means

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located in said second compartment (16), whereby solid chemical compounds are stored for dispersion within a medium (see col. 3, lines 11-17). Taylor et al. fails to teach a chemical dispersement rate adjustment means, whereby the dispersement rate within a medium, of said solid chemical compounds stored for dispersion within said chemical containment means, is adjustable. Taylor et al. also fails to teach a rate adjustment means that includes a main orifice, a sliding door orifice and a sliding door.

Mercer discloses a water treatment apparatus that includes a chemical agent that is dispensed into a body of water in order to neutralize disease causing bacteria, viruses, and protozoa pathogenic organisms. The device (10) floats in water and utilizes salt (20) and water to form a highly concentrated salt brine within the device which is then energized with a DC voltage to produce hydrogen bubbles and thus drawing the salt brine between cell plates (14 and 16). From there the fluid containing chlorine atoms passes into the water (11) through outlet portals (24). The outlet portals (24) preferably utilize sliding gates (26) to adjust the fluid flow into the water and regulate the chlorine (see figure 1; col. 6, line 38 to col. 7, line 20; col. 7, lines 48-55; col. 8, lines 37-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Taylor et al. and include a chemical dispersement rate adjustment means that includes a main orifice, a sliding door orifice and a sliding door as taught by the invention of Mercer in order to regulate and control the amount of chlorine dispersed into the water.

Regarding claims 2 and 12, Taylor et al. discloses and provides a first compartment (13) is fully sealed from contamination by said medium, and further wherein said propulsion means located in said first compartment is sealed from contamination by said medium (see figure 3, col. 3, lines 19-50).

Regarding claims 3 and 13, Taylor et al. discloses and provides a first compartment that further includes a flotation unit and a ballast unit to obtain a desired buoyancy for the device as a whole (see col. 3, lines 19-27).

Regarding claims 4, 7, 8, 14, 17, and 18 Taylor et al. discloses and provides a propulsion means (20) that includes an electric motor (22), power transfer means (solar panel (21)) and an external actuator (propeller (24)) for setting the device into motion (see figure 3; col. 3, lines 27-39). The solar panel is located on the upper portion of the device so that the panel (21) is exposed to sunlight (see figure 1; col. 3, lines 39-41). Regarding claims 9 and 19, Taylor et al. discloses and provides a chemical containment means located in said second compartment (16) that includes a detachably removable compartment cover, whereby, said cover is detached, removed, filled with solid chemical to be dispersed, and replaced prior to deployment of said device (see figures 1 and 3; col. 3, lines 9-18). Furthermore, Taylor et al. discloses an alternative embodiment wherein a retrofit drive system (60) is adapted to operably couple to an existing floating chlorinator (68) (see figure 6).

3. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Khan or Mercer as applied to claim 4 and 14 above, and further in view of Oberg (U.S. Patent No. 2,854,787).

Taylor in view of Khan or Mercer fail to provide or disclose an external actuator for setting the device into motion that is a fish fin-like actuator.

Oberg discloses a device for propelling and steering a buoyant object in a liquid medium. More particularly, the invention is concerned with means for self-propelling aquatic toys. A toy whale (10) is provided with a propulsion mechanism (tail fin (15)) which is attached to an integral motor assembly (21) and functions as the propeller for the toy (see figures 1 and 2; col. 1, lines 11-16; col. 2, lines 1-20). This reference has been relied upon to teach that it is known to use a fish fin-like actuator as the external actuator in order to propel an object in a liquid medium.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Taylor et al. in view of Khan or Mercer and replace the propeller (24) with a functionally equivalent alternative propulsion means such as a fish fin-like fin as taught by the self propelled device of Oberg.

4. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Khan or Mercer as applied to claim 4 and 14 above, and further in view of Haski (U.S. Patent No. 6,074,553).

Taylor et al. in view of Khan or Mercer fail to teach an electric motor that is powered by an on-board battery located in said first compartment and connected in electrical communication with said electric motor.

Haski discloses a water skimmer which floats on the surface of a body of water. The skimmer is propelled by an on-board propulsion unit, and collects and traps floating debris along its movement path (see abstract). The skimmer further includes an optional housing (10) for chlorine tablets (see figure 3; col. 3, lines 49-51). The on-board propulsion unit (15) (consists of an electric motor driving propeller (16)) is powered by an array of solar cells (9) located on the top surface of body (2). These allow the skimmer to be powered cheaply and in an environmentally friendly manner and will allow the skimmer to operate continuously throughout the day. In a preferred form, the skimmer will also have at least one rechargeable battery (11) onboard. The battery (11) is charged by the solar cells and delivers a source of constant power to the propulsion unit. This also allows the skimmer to operate when there is no sunlight available. Alternatively, the skimmer may be powered purely by an onboard battery, whether rechargeable or not (see col. 3, lines 25-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Taylor et al. in view of Khan or Mercer and include an onboard battery which powers the electric motor as taught by Haski in order to provide a constant source of power to the propulsion system even when no sunlight is available (see col. 3, lines 30-39). Furthermore, it would have been

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well within the ordinary skill of the art to place the battery within the first compartment with the electric motor since that area is sealed off from the surrounding water.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Conley whose telephone number is 571-272-8414. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 2, 2005

SEC

J.E.C.


JOHN KIM
SUPERVISORY PATENT EXAMINER